

WHAT IS CLAIMED IS:

1. A panel inspection apparatus for inspecting a display panel, wherein the display panel has a side on which
5 a panel electrode group is arranged, the panel inspection apparatus comprising:

an inspection unit including an inspection electrode, wherein the inspection unit causes the inspection electrode to contact the panel electrode group and moves in a
10 direction perpendicular to the side of the display panel; and

a pressurizing mechanism for pressing the inspection electrode against the panel electrode group, wherein the pressurizing mechanism moves independently in a direction
15 perpendicular to the side of the display panel in a state in which the inspection unit is arranged at a position where the inspection electrode contacts the panel electrode group.

2. The panel inspection apparatus according to claim
20 1, wherein the inspection electrode is fastened to the inspection unit in a state inclined toward the display panel by a predetermined angle.

3. The panel inspection apparatus according to claim
25 1, further comprising:

a positioning device connected to the inspection unit; and

a jig for supporting the positioning device, wherein the positioning device is secured to the jig in
30 correspondence with the panel electrode group.

4. The panel inspection apparatus according to claim
3, wherein the panel electrode group is one of a plurality

of panel electrode groups formed in accordance with the dimension of the display panel, the panel electrode groups being spaced from one another by a predetermined pitch, wherein the positioning device is one of a plurality of
5 positioning devices provided in correspondence with the panel electrode groups, the positioning devices being secured to the jig spaced from one another by the predetermined pitch.

10 5. The panel inspection apparatus according to claim 4, wherein the jig includes a surplus positioning device separated from the positioning devices corresponding to the panel electrode groups.

15 6. The panel inspection apparatus according to claim 3, wherein the display panel is either one of a first display panel having a first size and including a plurality of first panel electrode groups or a second display panel having a second size differing from the first size and
20 including a plurality of second panel electrode groups, wherein the jig is either one of a first jig adapted to the first display panel or a second jig adapted to the second display panel, the first jig including a plurality of first positioning devices prearranged at positions corresponding
25 to the plurality of first panel electrode groups, and the second jig including a plurality of second positioning devices prearranged at positions corresponding to the second panel electrode groups.

30 7. The panel inspection apparatus according to claim 3, further comprising:

an adjusting element arranged on the positioning device, wherein the adjusting element finely adjusts the

position of the inspection unit by moving the inspection unit along the side of the display panel.

8. The panel inspection apparatus according to claim 5 1, wherein the pressurizing mechanism includes two pressurizing levers for causing the inspection electrode to contact the panel electrode group with a predetermined force, wherein the pressurizing levers move toward the display panel in a first direction that is perpendicular to 10 the one side of the display panel and moves away from the display panel in a second direction that is opposite the first direction, and wherein the inspection electrode is arranged at a position near the panel electrode group where the inspection electrode is visual when the pressurizing 15 levers are separated from the side of the display panel.

9. The panel inspection apparatus according to claim 1, further comprising:

20 a drive circuit for providing the display panel with an inspection signal;

a relay printed circuit connected to the inspection electrode to electrically connect the inspection electrode and the drive circuit; and

25 a connector connecting the relay printed circuit and the drive circuit, wherein the connector disconnects the relay printed circuit and the drive circuit when the inspection electrode is separated from the panel electrode group.

30 10. The panel inspection apparatus according to claim 9, wherein a passage enabling passage of the relay printed circuit is formed on one of the two pressurizing levers.

11. The panel inspection apparatus according to claim 10, wherein the two pressurizing levers includes an upper pressurizing lever and a lower pressurizing lever pivoted to apply force to an upper surface and a lower surface of the inspection electrode, and wherein the inspection unit further includes a pivoting amount adjusting element for adjusting a pivoting amount of the upper pressurizing lever.

12. The panel inspection apparatus according to claim 11, wherein the pivoting amount adjusting element adjusts the pivoting amount of the upper pressurizing lever so that a distal end of the inspection electrode contacts the panel electrode group.

13. The panel inspection apparatus according to claim 10, further comprising:

a pivot shaft extending perpendicular to the one side of the display panel; and

a fulcrum block pivotally supported by the pivot shaft and pivotally supporting the two pressurizing levers.

14. The panel inspection apparatus according to claim 13, further comprising:

a pivot restricting element for restricting the pivoting of the fulcrum block when the two pressurizing levers pivot away from the inspection electrode and contact the pivot restricting element.

15. A panel inspection apparatus for inspecting a display panel, wherein the display panel has a side on which a plurality of panel electrode groups are arranged, the panel inspection apparatus comprising:

a plurality of inspection units including inspection

electrodes, wherein the inspection unit causes the inspection electrode to contact the panel electrode group and moves in a direction perpendicular to the side of the display panel; and

- 5 a plurality of pressurizing mechanisms for pressing the inspection electrodes against the panel electrode group, wherein the pressurizing mechanism moves independently in a direction perpendicular to the side of the display panel in a state in which the inspection unit is arranged at a
- 10 position where the inspection electrode contacts the panel electrode group.